

CLAIMS

1. A method for aligning at least one optic and/or electronic component (2) on a substrate (3) or a corresponding support structure,
5 **characterised** in that the method comprises:
arranging a hole (4) in the support structure;
arranging at least three stud bumps (5) on the surface of the component (2);
and
arranging said stud bumps along the periphery of the hole (4) for alignment of
10 the component (2) to the hole (4).
2. A method according to claim 1, **characterised** in that aligning the component (2) is performed by arranging the outer surfaces of the stud bumps against the hole walls.
3. A method for aligning at least one optic fibre (1) and an optoelectronic component (2) to each other according to claim 1, wherein the component (2) is mounted on a supporting structure (3) and the optic fibre (1) is connected to the optoelectronic component (2),
15 **characterised** in that the method comprises:
threading the optic fibre (1) through the hole, and
20 aligning the optic fibre (1) and the component (2) with each other by means of the stud bumps (5).
4. A method according to claims 1 or 3, **characterised** in that aligning the fibre is performed by arranging the fibre against the inner surfaces of the stud bumps.
- 25 5. A method according to claims 1 to 4, **characterised** in that the stud bumps have at least partly a conical and/or rounded surfaces, and that aligning the optic fibre (1) with the component is performed by adapting the optic fibre along sloping conical inner surfaces and a horizontal brim in the stud bumps.
- 30 6. A method according to claim 1 or 4, **characterised** in that the component is a surface emitting optoelectronic component, that the optic fibre is arranged perpendicular to the support structure, and that the fibre is connected to a radiating source on the metallized surface (22) of the component facing the substrate.
- 35 7. A method according to claim 1, **characterised** in that a conductive adhesive (7a) is used on the stud bump (5) outer surfaces to accomplish an electrical connection to the support structure (3).

8. A method according to claim 1, **characterised** in that a direct bonding method is used to connect the stud bumps (5) to the support structure (3).

9. A method according to claim 1, **characterised** in that the stud bumps are of a solder material, and that a solder connection is used to connect the stud bumps (5) to the support structure (3).

10. An arrangement for aligning at least one optic and/or electronic component (2) on a substrate (3) or a corresponding support structure, **characterised** in that the arrangement comprises:
a hole (4) in the support structure;
at least three stud bumps (5) arranged on the surface of the component (2) along the periphery of the hole (4), for aligning the component (2) centered to the hole (4).

11. A arrangement according to claim 10, **characterised** in that the stud bumps have at least partly a conical and/or rounded surfaces, and that an optic fibre (1) is aligned with the component by adapting the optic fibre along sloping conical inner surfaces and against a horizontal brim in the stud bumps.

12. An arrangement according to claim 10 or 11, **characterised** in that the component is a surface emitting optoelectronic component, that the optic fibre is arranged perpendicular to the substrate, and that the fibre is connected to a radiating source on the metallized surface (22) of the component facing the substrate.

13. An arrangement according to claim 10, **characterised** in that a conductive adhesive (7a) is used on the stud bump (5) outer surfaces to accomplish an electrical connection to the substrate (3).

14. An arrangement according to claim 10, **characterised** in that direct bonding is used to connect the stud bumps (5) to the substrate (3).

15. An arrangement according to claim 10, **characterised** in that the stud bumps are of a solder material, and that a solder connection is used to connect the stud bumps (5) to the substrate (3).

16. An arrangement according to claim 10, **characterised** in that the substrate (3) consists of at least two layers (31-33), and that the diameter of the hole (4) portion(s) (41) in the layer(s) (31) near the component is bigger having place for both the stud bumps and the optic fibre than in other opening portion(s) (42) having a diameter essentially corresponding the diameter of the optic fibre.